REMARKS

In the Office Action mailed 3/20/2006, Claims 1-2, 9-11, 14-17 and 19-20 were rejected as being anticipated by the prior art under 35 U.S.C. §102(b). Claims 3-4, 6-8, 12-13 and 18 were rejected as being obvious over the prior art under 35 U.S.C. § 103. Claim 5 was canceled.

Applicant has herein amended claims 4, 6 and 9, and now respectfully traverses the claim rejections for the reasons set forth below.

Technical Issues

In the interest in a satisfactory disposition of this case without the need for further prolonged prosecution, Applicant is compelled to address what appears to be confusion or misunderstanding by the Examiner regarding the nature of Applicant's invention. Applicant believes that this issue is central to the repeated rejections of its claims where the rejections are grounded in references that simply are not analogous to Applicant's invention.

To this end, Applicant has provided the attached sheet of sketches labeled Examples A, B and C. Each of these examples depict a different approach for creating a hole in a piece of flat material. Example A depicts Applicant's unique punching device and method. The mandrel (having a punch attached to its head) is driven towards the material to be punched by a powder-actuated tool. The punch, when it strikes the material, causes a blank to be punched out of the material. As is extensively discussed in the specification, the particular value of this approach is that no "die" is necessary. The environment for which this design was conceived was for the construction of commercial buildings, where holes must be formed in the metal subfloors so that wires, pipes, etc. can pass through the metal

subfloor to reach an adjacent floor. Due to the sheer number of holes to be formed, and the large surface area of the metal subfloor (and the fact that the sheet of metal which is the subfloor is now a part of the building), the uni-directional approach for punching holes is a critical aspect. No prior method would provide satisfactory results.

Example B depicts a conventional punch press process. This is the approach used by both *Timp* and *Adleman*. It involves pressing the punch through the material while the die supports the opposing side of the material. In most cases, this process occurs within the press, and the die is actually attached to the press.

Example C depicts a conventional draw press process. This is the approach used by *Ducret* and *Adleman* (*Adleman* discloses its punch as being suitable for either punch presses or draw presses). In this approach, the punch is pulled towards the force-creating tool (in this case being pulled upwardly). The die is attached or incorporated within the force-creating tool. The first step in the draw press process requires that a hole be formed in the material so that the shank of the punch can be slid through until it engages the force-creating tool. This is not even similar to the process of Example A, and would be unsuitable in the environment for which Applicant's invention was conceived because it would require a second worker in the next floor down to feed the punch shank up through the hole formed in the material.

Hopefully this will clarify the distinctions between the operation of Applicant's invention and the operation of the cited prior art, at least for the purpose of expediting the successful prosecution of this application.

Anticipation Rejections

Claims 1-2, 9-11, 14-17 and 19-20 were rejected as being anticipated by *Timp*, *Lowerwald* and *Ducret* under 35 U.S.C. §102(b).

None of these references teach, disclose or suggest each and every element of the claims as arranged in the claims. To graphically demonstrate this, Applicant has provided marked-up copies of these references wherein the Examiner's purported element-by-element analysis is shown. As for *Timp*, except for the punch labeled as element 16 by this reference, it is impossible to discern any correlation between the teachings of this reference and what is recited by Applicant's claims. In particular, there is no mandrel, there is no disk-shaped head on said mandrel, nor is there a mandrel head adjacent to the punch. Please refer to the attached marked-up copy of *Timp*'s Figure 1.

As for *Lowerwald*, either the mandrel does not have a disk-shaped head, or the punch does not have a flat base end adjacent to the disk-shaped head.

Finally, *Ducret* is a draw punch. Its punch is drawn towards the die by a shaft 24. There is no mandrel, nor is there a disk-shaped head of the mandrel.

These references fail to teach or enable[1] each of the claimed elements (arranged as in the claim)[2] expressly or inherently[3] as interpreted by one of ordinary skill in the art,[4] and therefore this ground for rejection must be allowed.

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[1] *Akzo N.V. v. U.S. Int'l Trade Comm'n*, 808 F.2d 1471, 1 USPQ 2d 1241, 1245 (Fed. Cir. 1986) (citing *In re Brown*, 329 F.2d 1006, 1011, 141 USPQ 245, 249 (CCPA 1964).
[2] *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ at 485.
[3] *Continental Can Co. USA v. Monsanto Co.*, 20 USPQ 2d at 1749-50.
[4] *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 18 USPQ 2d 1001, 1010 (Fed. Cir. 1991).

Obviousness Rejections

Claims 3-4, 6-8, 12-13 and 18 were rejected as being obvious over *Timp/Aldeman*, *Ducret* and *Timp/Loerwald* under 35 U.S.C. § 103.

As discussed in the Technical Issues section, *Timp*, *Ducret* and *Aldeman* all disclose either punch pressing or draw pressing processes and structure. Nothing in these references suggests using a uni-directional, die-less punch process used by Applicant's invention. *Loerwald* does disclose a uni-directional punch for paint cans, but as discussed in connection with the Technical Issues, *Loerwald* does not include all of the elements of Applicant's claimed invention (i.e. the mandrel head). Furthermore, *Loerwald* does not suggest any use of a powder-actuated tool in its method for forming a hole in the paint can. While *Ducret* does disclose the use of a powder-actuated tool to form a hole, it only suggests doing so in a draw press process. There is no evidence that one of ordinary skill in the art would combine a powder-actuated driving force with a uni-directional, die-less punch process, such as *Loerwald*. In fact the long history of punching metal had only included die pressing, with the possible exception of *Loerwald*. As such, it appears that the Examiner is using hindsight to conclude that such a combination would have been obvious. Applicant vehemently disputes this because until he conceived the claimed invention, there was no punching process that was suitable for his environment. It is Applicant's respectful position that the substantial benefits shown by the operational comparisons are clear evidence of "secondary considerations" indicating nonobviousness, and that the Examiner has used his personal knowledge in reaching his conclusion that the combining *Loerwald* and *Ducret* would have even been considered by one of ordinary skill. As

such, Applicant respectfully requests that Examiner provide an affidavit as to the use of his personal knowledge in his taking this Official Notice.[5]

Since there is no suggestion to combine these references, nor any suggestion to modify *Ducret* or *Timp*, and these references, even if combined or modified, would not teach[6] the elements of Applicant's claims, their modification or combination would not be sufficient to have made the claimed invention obvious to one of ordinary skill in the art,[7] and these grounds for rejection must be withdrawn.

As for the Examiner's comments regarding Claim 13, Applicant respectfully asserts that the entire language of the claim, including the structural limitations added by that claim do limit the claim, and therefore the "whereas" element does differentiate the claimed apparatus from the prior art.

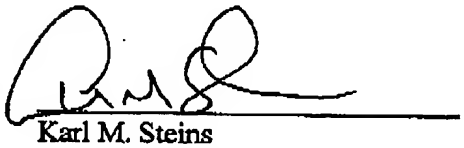
[5] 37 C.F.R. 1.107(b) "When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons."
[6] *Akzo N.V. v. U.S. Int'l Trade Comm'n*, 808 F.2d 1471, 1 USPQ 2d 1241, 1245 (Fed. Cir. 1986) (citing *In re Brown*, 329 F.2d 1006, 1011, 141 USPQ 245, 249 (CCPA 1964).
[7] *Rockwell Int'l Corp. v. United States*, 147 F.3d 1358, 47 USPQ 2d 1027, 1033 (Fed. Cir. 1998).

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests that the application be reconsidered, the claims be allowed, and the case passed to issue.

Respectfully submitted,

STEINS & ASSOCIATES



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US005329835A

United States Patent [19]

Timp et al.

[11] Patent Number: 5,329,835

[45] Date of Patent: Jul. 19, 1994

[54] ADJUSTABLE LENGTH PUNCH SET ASSEMBLY

[75] Inventors: Richard L. Timp, Vadnais Heights; Michael W. Schultz, Wayzata; John H. Morehead, White Bear Lake, all of Minn.

[73] Assignee: Wilson Tool International, Inc., White Bear Lake, Minn.

[21] Appl. No.: 958,021

[22] Filed: Oct. 7, 1992

[51] Int. Cl.[5] B26F 1/14

[52] U.S. Cl. 83/686; 83/698.71

[58] Field of Search 83/700, 686, 684, 697

[56] References Cited

U.S. PATENT DOCUMENTS

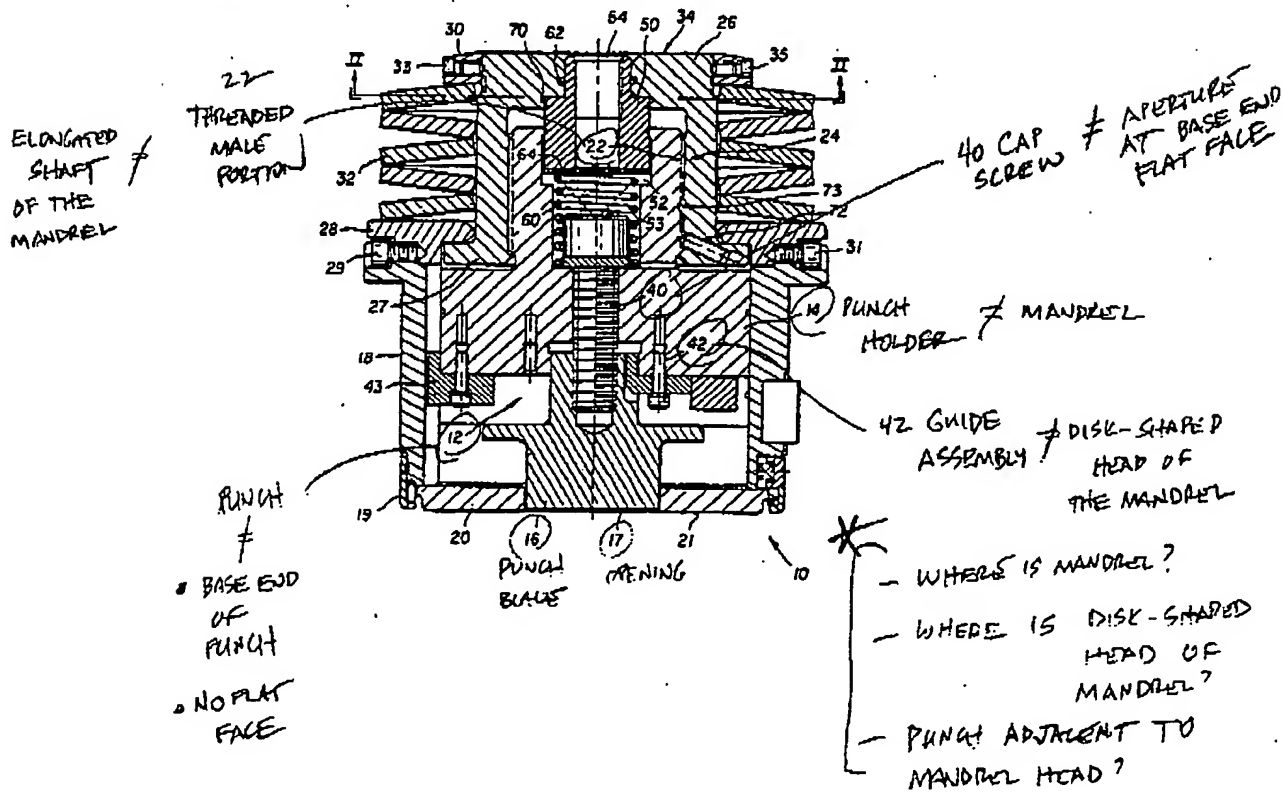
3,848,496	11/1974	Stevens et al.	83/133
3,926,082	12/1975	von Langendorff	83/140
4,012,975	3/1977	LaLone	83/140
4,031,787	6/1977	Cady	83/140
4,141,264	2/1979	Weinbeck	83/23
4,375,774	3/1983	Wilson et al.	83/140
4,440,052	4/1984	Weinbeck	83/140
5,020,407	6/1991	Brinlee	83/530
5,054,347	10/1991	Johnson et al.	83/700 X

Primary Examiner—Richard K. Seidel
Assistant Examiner—Kenneth E. Peterson
Attorney, Agent, or Firm—Fredrikson & Byron

[57] ABSTRACT

An adjustable length punch set assembly for adjusting the overall length of a punch having a punch driver and punch holder that are axially adjustable relative to each other and retained at least in part within a punch guide sleeve and biased axially with respect thereto by a biasing spring. A locking push button is positioned axially within and accessible through a hole of the punch driver, the push button being moveable between a first position for locking the punch driver with respect to the punch holder to prevent length adjustment by rotation of mutually engageable threaded portions thereof, and a second position allowing relative rotation of the punch driver and punch holder along the mutually engageable threaded portions to effect length adjustment. The push button includes one or more detents formed thereon, the detents being engageable with one or more first detent stop(s) formed in the punch driver and second detent stop(s) formed in the punch holder. The number of second detent stops in the punch holder preferably is less than the number of first detent stops of the punch driver, such that the number of first detent stops is an integer multiple of the one or more detents of the push button. A spring is provided for biasing the locking push button into the first position. The spring is depressible by an external force applied through the hole in the punch driver to the push button thereby moving the push button into the second position.

10 Claims, 3 Drawing Sheets



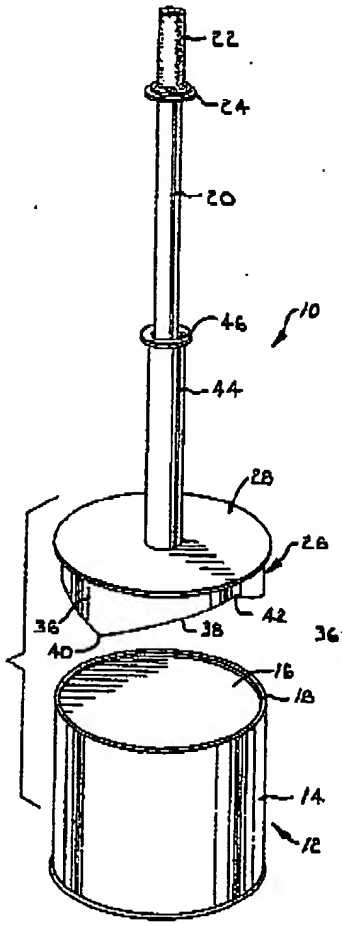


Fig. 1.

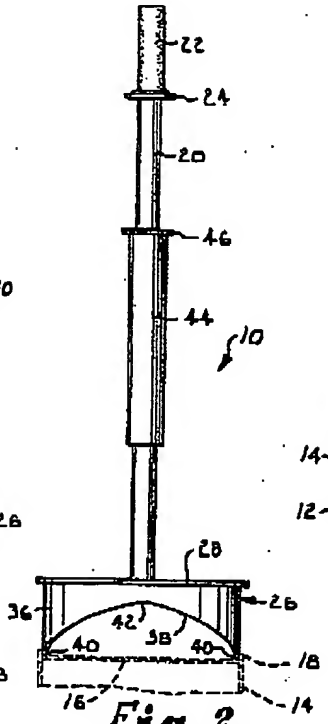


Fig. 2.

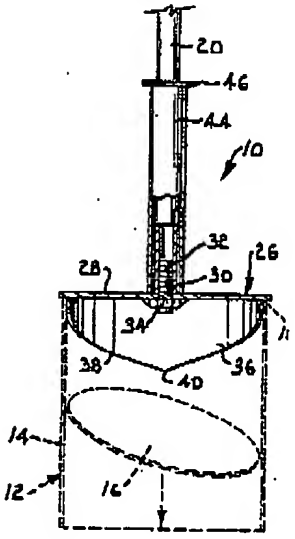


Fig. 3

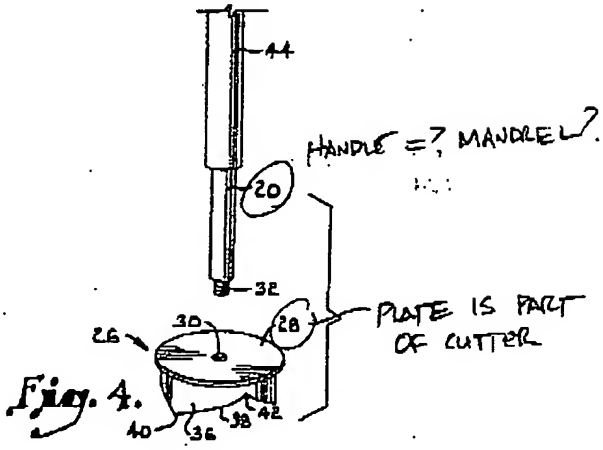


Fig. 4.

* IF 20 = MANDREL, WHERE IS HEAD OF MANDREL?

* IF 28 IS BASE END OF PUNCH, WHERE IS MANDREL HEAD?

United States Patent [19]
Ducret

[11] **Patent Number: 4,793,063**
[45] **Date of Patent: Dec. 27, 1988**

[54] **PUNCH GUN**

[76] Inventor: Lucien C. Ducret, 9 Tod's Driftway, Old Greenwich, Conn. 06870

[21] Appl. No.: 32,770

[22] Filed: Mar. 31, 1987

[51] Int. Cl.[4] B26F 1/02
[52] U.S. Cl. 30/360; 30/277; 30/DIG. 4
[58] Field of Search 30/DIG. 4, 360, 367, 30/277, 301, 316; 227/9, 10

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,017,329	10/1935	Temple	30/277 X
2,133,364	10/1938	Temple	30/DIG. 4 X
3,024,666	3/1962	Haskell et al.	30/277 X
3,074,165	1/1963	Davis	30/DIG. 4 X
3,269,011	8/1966	Herrstrom	30/360
3,564,716	2/1971	Burrows	30/360
3,863,341	2/1975	Ramer	30/DIG. 4 X

FOREIGN PATENT DOCUMENTS

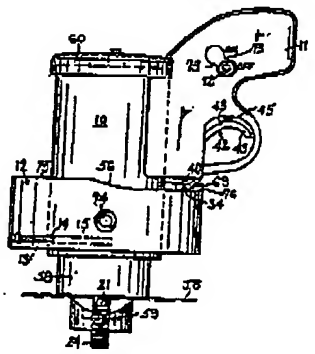
919940 9/1954 Fed. Rep. of Germany ... 30/DIG. 4

Primary Examiner—E. R. Kazenske
Assistant Examiner—Michael D. Folkerts
Attorney, Agent, or Firm—DeLio & Associates

[57] **ABSTRACT**

An explosive actuated hand tool for cutting clean holes in sheet material, wherein the explosive force causes a piston to pull a punch toward a die, the material being located between the punch and die. Convenience and safety features include means for arming the firing mechanism by rotation of a locking ring which secures a cartridge in its chamber and means to prevent movement of a firing pin unless a lever has been moved from an OFF position to the ON position.

16 Claims, 3 Drawing Sheets



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United States Patent [19]

Adleman et al.

[11] Patent Number: 4,543,722

[45] Date of Patent: Oct. 1, 1985

[54] SLUG-SPLITTING PUNCH

[75] Inventors: Larry G. Adleman; Richard H. Malanaphy, both of Rockford, Ill.

[73] Assignee: Ex-Cell-O Corporation, Troy, Mich.

[21] Appl. No.: 461,406

[22] Filed: Jan. 27, 1983

[51] Int. Cl.⁴ B26F 1/00

[52] U.S. Cl. 30/360; 83/688

[58] Field of Search 30/360, 361, 359, 366, 30/367, 443, 446; 72/325, 326; 83/689, 688

[56] References Cited

U.S. PATENT DOCUMENTS

1,817,223 8/1931 Abramson et al. 30/360

2,214,701 9/1940 Scull 83/689

2,221,904 11/1940 Abramson et al. 30/360

3,728,927 4/1973 Pfleiderer et al. ..... 83/688 X

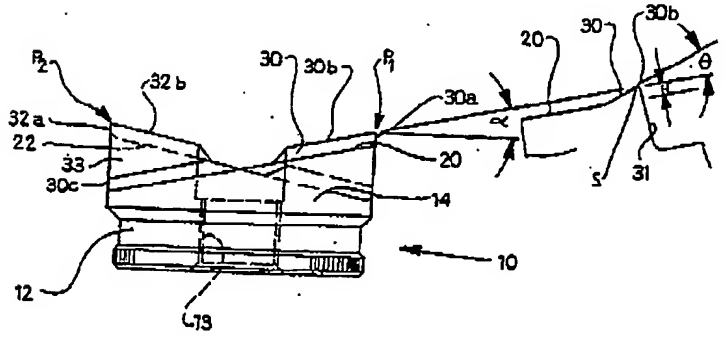
Primary Examiner—Douglas D. Watts

Attorney, Agent, or Firm—Edward J. Timmer

[57] ABSTRACT

A male punch member is disclosed for use with a female die member to remove a slug in two pieces from a sheet metal workpiece. The working end of the punch member is specially configured to enable punching and splitting of a slug into two pieces from a wide range of materials such as 10-gauge, type 304 stainless steel while providing acceptable punch life.

17 Claims, 6 Drawing Figures



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